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Federal Communications Commission
Office of the Secretary

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In the Matter of

Advanced Television Systems
and Their Impact on the
Existing Television
Broadcast Service

MM Docket No. 87-268

To: The Commission

COMMENTS OF RADIO TELECOM AND TECHNOLOGY, INC.

1. Radio Telecom and Technology, Inc. ("RTT") hereby submits these comments in the current round of the above-captioned proceeding.

2. RTT filed comments earlier in this proceeding, on November 18, 1987, describing its "T-NET" two-way interactive advanced television ("ATV") wireless data system that operates on a first adjacent channel collocated with an operating television broadcast station. Because the T-NET signal is synchronized with the television station signal, it appears at the location of any given TV receiver only when the TV picture is blanked out and so is incapable of causing any interference to television reception. T-NET is thus a highly efficient use of the spectrum. It also represents a considerable enhancement to the "Advanced Television" art in that it allows true interactivity, where up to 300,000 viewers can communicate simultaneously with a host television station, at rates as fast as a human being can type and with the full capabilities of a computer keyboard.^{1/}

3. The events in this docket suggest so far that both the broadcast industry and the Commission believe that ATV means only high definition television ("HDTV"), but ATV means far more than that. ATV must be considered in much

^{1/} It is important to note that RTT has proposed T-NET in both this proceeding and in Gen. Docket No. 85-172 (land mobile/UHF-TV spectrum sharing), and no party actively opposed the implementation of T-NET after reading RTT's comments. On the contrary, both the broadcast and land mobile industries have applauded the concept, either fully supporting RTT or differing only terms of whether T-NET should be considered in a separate proceeding or at the same time as other proposals.

broader terms if the public is to obtain the full benefit of advancements in technology. T-NET is only one example of the kind of ATV technology that is being ignored; but it is an important example, because it is ready and available for use now. In other words, T-NET has progressed further along the development curve than the HDTV concepts that have dominated this proceeding.

4. RTT urges the Commission to review its 1987 comments again at this time, because they are still relevant. As research and development on ATV progresses, RTT's statement early on that ATV service can be furnished within a 6 MHz bandwidth is being proved accurate. It is also becoming increasingly apparent, as RTT previously noted, that ATV will be developed and brought to fruition by inventors in the laboratory and entrepreneurs in the market place, not by committees and committee meetings. Finally, ATV will not come to life overnight. It will take several years before ATV is an established service.

5. Meanwhile, the Commission has made a serious error in essentially freezing new uses of the television spectrum while it awaits the outcome of ATV development. T-NET can be implemented now, within current adjacent channel radiation standards, if the Commission will only relax NTSC standards slightly -- in a manner which would retain compatibility with all existing NTSC receivers -- to permit intentional out of band emissions at levels no greater than are already permitted for unintentional out of band emissions. By refusing to undertake even so small a rule relaxation immediately, the Commission has deprived and continues to deprive the public of a new and valuable new service that is available and can be implemented immediately. Moreover, even though the Commission has professed to be attempting to ensure a role for United States technology in the new ATV world, it has restrained to the point of severe economic distress the development of a company whose invention is 100% made in the U.S.A.

6. There is no justification for the Commission's recalcitrance, because unlike other possible uses of the UHF-TV spectrum, T-NET would not restrain the development of HDTV systems. T-NET can use spectrum that the laws of physics of necessity declare off limits for any non-synchronized system, given the Commission's clear-cut decision to protect the existing universe of NTSC receivers. T-NET is flexible and can move to wherever HDTV cannot go in any television frequency band. Thus there is no reason to defer implementation of T-NET to preserve future options for ATV.

7. Moreover, as indicated above, T-NET provides interactive two-way service to television viewers, which is now unavailable over the air and is an enhancement to the television art just as much as, if not more than, greater picture detail and cleaner sound.^{2/} The Commission is wearing blinders when it limits its consideration of "advanced" television to only pictures and sound. Technology is not so blind and will not long be held within those rudimentary constraints.

8. Again, as before, RTT urges the Commission to turn the creative community of inventors loose. That is how the public will benefit the soonest and the most. A minor relaxation of NTSC standards, without sacrificing NTSC receiver compatibility, should be adopted at once.

Radio Telecom and
Technology, Inc.
17321 Valley View Ave.
Cerritos, CA 90701
(213) 926-0092

Respectfully submitted,


Peter Tannenwald

Arent, Fox, Kintner,
Plotkin & Kahn
1050 Connecticut Ave., N.W.
Washington, DC 20036-5339
(202) 857-6024

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Counsel for Radio Telecom
and Technology, Inc.

^{2/} Thus arguments against devoting broadcast spectrum to non-broadcast uses should not preclude the immediate implementation of T-NET.